Regulatory Considerations: Combined Sewer Overflows (CSOs)

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January 28, 2015





Combined Sewer Overflows (CSOs)

- Both storm water and wastewater, including domestic and industrial wastewater
- Storm water is dilute
- High and variable flows



Clean Environment Commission (CEC)

- CEC Report on Public Hearings (2003):
 - City's original plan: 2053
 - CEC's recommendation: 2023 2028 with significant action taken by 2006
- Current Licence: 2030



Clean Environment Commission (CEC)

- CEC recommended:
 - managing CSOs on an annual basis and not just during the recreational season
 - targeting CSO districts on a priority basis
 - implementing public notification for release of raw sewage



Canada-Wide Strategy

- CSOs/SSOs included in Strategy Manitoba signed in 2009:
- CSO/SSO do not increase in frequency due to development
- Within 7 years (2016) meet the national overflow standards for CSO/SSO
- Within 7 years (2016) have long term plans in place to reduce CSOs and capture substances



Canada-Wide Strategy

National Standards in Strategy:

- No increase in CSO frequency due to development or redevelopment
- No CSO discharge during dry weather
- Removal of floatable materials



Wastewater Systems Effluent Regulation

Federal WSER requires that facilities identify the location of all CSOs and report on the quantity of wastewater discharged via CSO



Manitoba Water Quality Standards, Objectives and Guidelines

- Regulation in 2011
- Phosphorus limit of 1 mg/L applies to existing facilities >820 kg TP (~2000 persons)
- Cumulative load includes multiple treatment facilities and combined sewer overflows



 Conservation and Water Stewardship issued Environment Act Licence No. 3042 to address CSOs that contains a requirement for the City to develop a plan for approval by 2017 to be implemented by 2030.



- No increase in CSOs due to development
- Use of green technology
- Public notification/education plans
- Require a plan to meet requirements by 2030
- Minimum requirements for treatment
- Reporting requirements



- Intent of the requirements is to provide the equivalent of primary treatment to the majority of the wastewater collected in the CSO system (85%)
- Requires that the City propose in the plan submitted per Clause 11 how the requirements of Clause 12 will be met.



- Clause 12 Requirements:
 - Removal of floatable materials
 - Effluent quality (at least 85%):
 - BOD5 < 50 mg/L
 - TSS < 50 mg/L
 - Total phosphorus < 1 mg/L
 - E.coli < 1000/100 mL

Manitoba Conservation and Water Stewardship



Licence Timelines

- December 31, 2013
 - Public Education Plan (9)
 - CSO event notification plan (14)
- January 31, 2014
 - Interim monitoring plan (15)
- May 1, 2014
 - Interim monitoring begins (15)
- December 31, 2015
 - Public Notification System (10)
 - Preliminary Proposal for the CSO system (11)

December 31, 2017 – CSO Master Plan (11)

- March 31 of each year
 - Annual progress report (13)
- December 31, 2030
 - Implementation of approved CSO Master Plan (11)